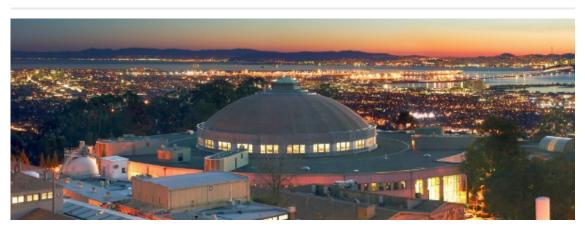
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SENTINEL



Vol VIII. February 2019

After a winter hibernation, the Sentinel returns with our February issue. Read on to hear more about upcoming conferences, CIEE research awards, wildfires and the electrical grid, and more.

upcoming EVENTS

February 21-23 BERC Energy Summit

Every Wednesday CITRIS Research Exchange

in the **NEWS**

U.S. Faces 'Immediate Threat' from Climate Change, Report Says

EU Aims to be 'Climate Neutral' by 2050





Call for Abstracts: BECC

Thanks to all those who made BECC 2018 the success that it was! As we look forward to 2019's BECC conference, the call for research abstracts has gone up for this year's event. For those who aren't familiar, the Behavior, Energy & Climate Change (BECC) Conference is the premier conference that brings together researchers, policymakers, utilities, and businesses focused on energy and behavior to advance knowledge and actionable climate solutions. This year's conference will be held from November 17th-20th, at the Hyatt Regency in Sacramento, California.

The theme of this year's conference is "Scaling Up". With many ecosystems at the brink of collapse, the need to mitigate climate change is more urgent than ever. BECC has been at the forefront of supporting behavioral research to address climate and energy issues for more than a decade. Now is the time to take these established principles and practices and scale them up. Scaling up means looking at the big picture, adapting small interventions for broad application, working with others, addressing policy, and generally taking climate action to the next level. In 2019, through regular and special sessions, we plan to showcase research, programs, organizations and people that help move toward a sustainable energy and climate future.

If you'd like to submit your abstract for a poster or individual presentation, you can do so <u>here</u>, or if you'd like to submit as a panel, you can do so <u>here</u>. If you'd rather just attend this year's BECC conference, you can register on our <u>website</u>.

CIEE Staff Wins BENEFIT Award for Brick Project

On the 29th of January, the Department of Energy announced up to \$42 million in project selections to support early-stage research and development of innovative residential and commercial building technologies, and we are happy to announce that a team including CIEE's Dr. Therese Peffer, alongside Computer Graduate Gabe Fierro (whose work was instrumental in developing Brick), Dr. Paul Raftery of the Center for the Built Environment, and Dr. Marco Pritoni and Dr. Michael Wetter from Lawrence Berkeley

National Lab, has won one of the awards under the BENEFIT program!

"Technological innovations enable energy-efficiency advances in the buildings sector, providing a tremendous opportunity to reduce energy waste and costs – boosting the competitiveness of U.S. companies and easing energy bills for American families," said David Nemtzow, director of the Building Technologies Office. "As buildings account for 40% of the energy consumption in the United States, these efficiency innovations allow us to further improve upon past progress."

The BENEFIT FOA awards were distributed among six research topic areas, which include technologies that can significantly improve building energy efficiency in heating, ventilation, and air conditioning (HVAC), water heating, and appliances, and building envelope applications; developing highly insulating building envelope materials and windows, novel approaches to building energy modeling and sensors and controls; testing next-generation building systems and equipment in real-world conditions; and significantly improving the energy efficiency of natural gas and other fuel-driven equipment.

The UC Berkeley team has won their award for their project "Skewering the Silos: Using Brick to Enable Portable Analytics, Modeling, and Control." The research team will advance Brick, an open-source data model based on semantic web technologies, into a schema to connect building information modeling, building energy modeling, and building automation systems. In short, BRICK seeks to create an all-in-one building operating system, able to organize and manage a variety of different proprietary building management control units into one universal control. If successful, Brick has a solid chance of being incorporated into smart building standards, extending its impact across the country and beyond. Congratulations to Therese and the Brick team for research funding well earned!

around CAMPUS

Research News: Who Benefits from the Solar Energy Revolution?

In a study by UC Berkeley and Tufts University, researchers shed light on the racial disparities in accessibility and adoption of emerging solar energy technologies. The study analyzes census information and remote sensing data from Google's Project Sunroof, concluding that various social biases and impediments to access weaken the reach of green energy utilities.

Though solar energy is instrumental in modern climate protection efforts and social equity, evidence shows that ethnic minorities in America disproportionately lag behind in solar energy uptake. Among the experts involved, Cal Professor Dan Kammen suggests that environmental justice efforts can use our findings to build a better and more inclusive energy transition.

CIEE's own Sergio Castellanos, interviewed for this piece, had this to say: ""Advances in remote sensing and in 'big data' science mean that we are now able to take a unique look at not just where solar is deployed, but to combine that with census and demographic data to chart also who gets to benefit from the solar energy revolution, and therefore think deeper about the effectiveness of current policies and approaches to accelerate solar photovoltaic deployment."

Berkeley News covered the release of the study <u>here</u>, and if you're interested in reading the study itself, it was published in <u>Nature Sustainability</u>.



(source: https://www.reviewjournal.com/news/nation-and-world/downed-power-lines-ignited-fatal-california-fires-report-says/)

From the Energy Institute at Haas Blog: Stabilizing Utilities in an Unstable Climate How can societies maintain stable utility supplies in an unpredictable environmental climate? In the Energy Institute at Haas' recent blog post, Professor Severin Borenstein of Haas School of Business describes the unfolding legal liabilities that energy utilities face from California wildfire damages. Borenstein explores PG&E's recent decision to file for bankruptcy, addressing pressing problems in modern day climate change adaptation and energy grid policy. His reasoning spans past, present, and future examinations of energy supplies in an evolving landscape.

This piece is an excellent reminder that issues regarding the electrical grid and environmental issues brought on by climate change are often times more intricately linked than apparent at first glance. To read on, the full blog post is available <u>here</u>, and to learn more about the institute and view additional blog articles, click <u>here</u>.





BERC Energy Summit 2019: February 21-23

The BERC Energy Summit is the largest student-run energy conference on the West Coast. This year's conference will be on February 21st through 22nd and focuses on the theme "Bringing Energy Communities Together for Innovation". Held at the Martin Luther

King Jr. Student Union in UC Berkeley, the event draws around 500 students, researchers, clean technology entrepreneurs, policymakers, and industry leaders to discuss the world's most pressing energy challenges. It will host a variety of panels covering topics from sustainable growth in developing countries to the cybersecurity of energy grids. Additionally, the Summit will showcase a research exposition and career fair, to provide undergraduates a chance to showcase their research in energy-related issues and to mingle with experts and future employers in the field today.

We at CIEE are regular advocates for Berkeley Energy Resources Collaborative, and every year the BERC Energy Summit shapes up to be an incredible event and we encourage everyone to attend. To learn more about the conference, click <u>here</u> or register <u>here</u>.



CITRIS Research Exchange

The CITRIS Research Exchange is a weekly seminar highlighting researchers, professors, and other leading experts that tackle societal-scale technology challenges. These seminars are free and open to the public, and occur every Wednesday from 12 to 1 pm in the Banatao Auditorium at Sutardja Dai Hall on UC Berkeley Campus.

This spring, the Research Exchange will include a variety of talks related to energy and environmental innovations, such as Kathy Yelick's seminar on March 6th. As former Director of National Energy Research Scientific Computing Center (NERSC) and current Associate Director for Computing Sciences Berkeley Lab, Yelick is a pioneer in high-performance computing and development of novel programming languages. Attendance is free, but free lunch will be provided for attendees who register online before the Monday prior to their chosen event. The whole schedule of exchanges is already posted on CITRIS's <u>website</u>, so if you see a speaker or topic you're particularly interested in, we encourage you to attend!



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